## Isaacson, Rosenbaum, Woods & Levy, P.C.

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SENDER'S DIRECT DIAL (303) 256-3986

sender's internet address jsteeler@irwl.com

November 5, 2001

HAND DELIVER

Ms. Dawn Tesorero Technical Enforcement Program U.S. Environmental Protection Agency Suite 300 999 18th Street Denver, CO 80202-2466 HOV - 5 2001

Office of Enforcement

Re:

First Request for Information Pursuant to § 104 of CERCLA for the Vasquez Boulevard/I-70 Site, Denver, Colorado

Dear Ms. Tesorero:

On behalf of Pepsi Bottling Group ("PBG"), the attached is intended to supplement PBG's earlier responses to the above-referenced information request. On September 11, 2001, I forwarded on behalf of PBG a description of work at the PBG facility. This description outlines seven work areas. On September 11, 2001, I forwarded soil sampling results for Areas 1 and 2. On October 1, 2001, I forwarded soil sampling results for Area 4.

Responsive to questions 9(g) and 9(h) of the original information request, enclosed herewith are soil sampling results for Area 3, Area 6, and certain utility trenches that will be used to serve the PBG project. As in the past, I have not included certain of the appendices such as project photos. If you would like a copy of the same, please contact me.

Except as noted below, none of the reports indicate any levels of soil contamination that would cause the soil to be considered a hazardous waste. Only one sample in the utility trenches exhibited levels of lead that may cause the soil, upon excavation, to be considered a hazardous waste. The utility trenches are not currently planned for excavation until next year. PBG, prior to excavation of this area, anticipates performing additional sampling to better delineate the extent of these levels of contamination and to determine its options.

ISAACSON, ROSENBAUM, WOODS & LEVY, P.C.

November 5, 2001 Page 2

In addition to the foregoing, on June 21, 2001, I forwarded sampling results relating to a 14,000 cubic yard soil stockpile located on the PBG property. In that letter I advised that the soil stockpile would be removed by Diamond Excavation during or shortly after the week of July 2, 2001. Diamond Excavation advised PBG that it did not need the soil in the stockpile. Accordingly, it is anticipated that the stockpile will be removed by Waste Management and disposed of at a local landfill over the next two weeks. Upon removal, PBG will forward information responsive to Question 8 of the request for information.

If you have any questions regarding this letter or need further information (including further certification), please advise the undersigned.

Very truly yours,

Jonathan H. Steeler

JHS:jkw Enclosure 507880

cc:

David H. Patrick, Esq. Dennis H. Hunter, Ph.D.



## **PROJECT REPORT**

Soil Testing for Lead & Arsenic

## North Court Loading Docks And Related Paving Area 3

**Project Location:** 

Pepsi Bottling Group 3801 Brighton Blvd. Denver, CO 80216

Prepared by:

Gary E. Johnson
Transportation & Industrial
Services, Inc.
3772 Puritan Way, Unit #4
Erie, CO 80516

Report Date:

October 29, 2001

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Table 2. Total Pb and As Analytical Results-Area 3

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Figure 1. Sample Location Diagram

#### **Appendix-List of Attachments**

- Oct. 18, 2001 Soil Samples Chain-of-Custody
- Oct. 18, 2001 Soil Samples Laboratory Reports
- Project Photographs

#### 1.0 Project Background

In order to obtain information on possible lead and arsenic in soils at the Pepsi Bottling Group facility located at 3801 Brighton Blvd., Denver, Colorado 80216, soil samples were collected from Area 3 of the Plastic Bottle Line Project prior to construction activities that will involve disturbing the soil. Area 3 consists of the back lot of the bottling plant, which is scheduled to be paved with asphalt as part of the overall expansion project. The sampling project was conducted by Gary E. Johnson of Transportation & Industrial Services, Inc., 3772 Puritan Way, Unit # 4, Erie, Colorado 80516 on October 18, 2001

#### 2.0 Sampling Locations

Currently Area 3 consists mostly of gravel driveway and parking areas. Area 3 is 320 feet wide by 920 feet long (6.76 acres). The boring locations were selected randomly using a random number generator to select x and y coordinates within 20 equal sized sections (92 feet by 160 feet) of Area 3. Below is Table 1, which lists the coordinates (in feet) for each boring location within the sections of Area 3. The coordinates in each section were measured from the southeast corner of each section designated as (x,y) = 0,0.

Table 1.
Randomly Selected Coordinates -Area 3

Area 3	X	Y
Section	Coordinate	Coordinate
A3-1	36	45
A3-2	39	25
A3-3	39	38
A3-4	85	25
A3-5	62	126
A3-6	31	94
A3-7	20	31
A3-8	83	137
A3-9	11	92
A3-10	10	54
A3-11	64	15
A3-12	62	112
A3-13	35	25
A3-14	85	148
A3-15	64	120
A3-16	48	124
A3-17	49	71
A3-18	38	53
A3-19	68	83
A3-20	66	121

One composite soil sample from each of the 20 soil borings was collected from within these dimensions from a depth of 0'-2' feet below ground surface (bgs), which is the maximum depth that will be disturbed in applying asphalt. Samples were collected from each of the 20 sections, although in some of the sections, the new grade will actually be higher than the existing grade. Refer to the Sample Location Diagram attached to this report for a representation of the sample locations in Area 3.

#### 3.0 Sampling Procedure

The soil samples were collected using Geoprobe hydraulic push drilling rig. Stainless steel drive tubes were advanced through the soil at each boring location to the desired depth. New clear plastic sampling sleeves were used to retrieve the samples from each boring. The soil removed from the plastic sleeves samples was placed in a stainless steel bowl and thoroughly mixed with a stainless steel spoon. Three sterile 4-ounce sample jars were filled with soil from the bowl for each sample, and the remaining soil was placed back into the boring. This procedure was repeated for each boring, thus yielding 20 composite soil samples for analysis from Area 3 representing the depth from 0' to 2' bgs. The samples were designated A3-1 through A3-20.

The stainless steel drive tube, bowl, and spoon were decontaminated after each boring to prevent cross contamination between samples. These items were scrubbed in an Alconox TM detergent and distilled water solution and then triple-rinsed with distilled water and dried with clean paper towels before being utilized for the next boring.

A chain-of-custody was completed and the sample jars were labeled, sealed, and placed in a cooler on ice for transportation to the laboratory. The samples were analyzed by Evergreen Analytical, Inc. located at 4036 Youngfield St. in Wheat Ridge, Colorado 80033. Each composite sample was submitted for Total Lead and Total Arsenic analysis by EPA Method SW6020A. The chain-of-custody and the laboratory reports are included as an attachment to this report.

#### 4.0 Description of Soil Samples

Since the borings were collected from a shallow depth (0"-2"), the physical description was substantially the same for all samples. The soil consisted of an imported gravel road base fill, poorly sorted with gravel and pebbles to 1" diameter and occasionally small pieces of red brick.

#### 5.0 Analytical Results

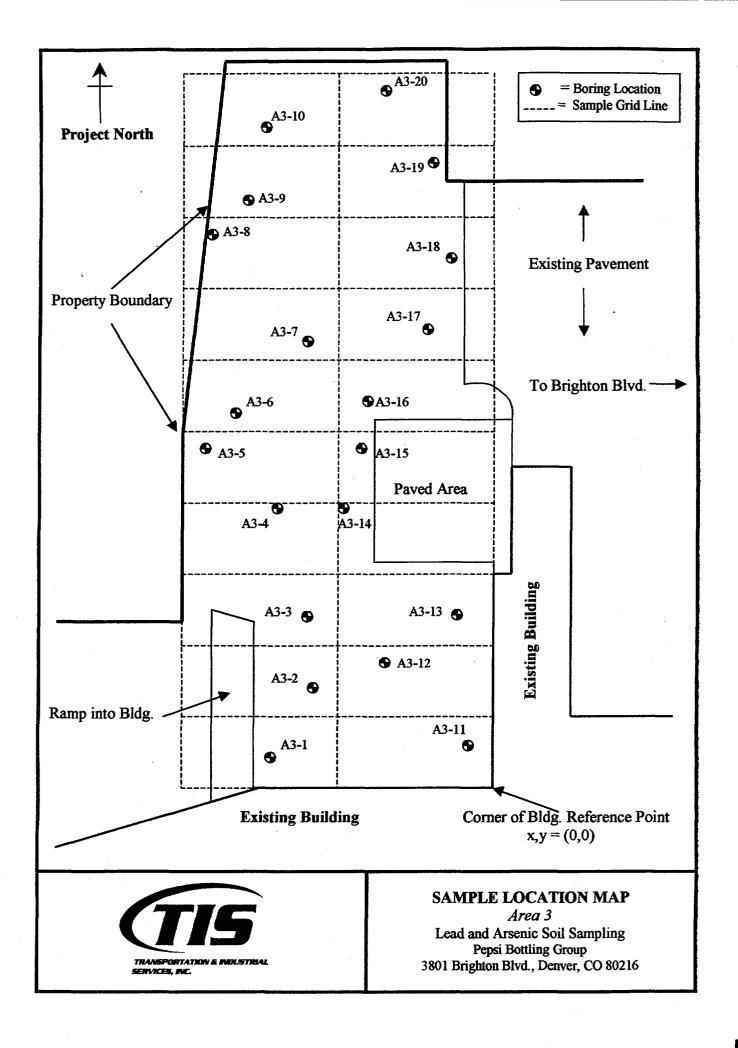
Below is a table listing the analytical results of the samples collected from Area 3.

Table 2.
Pb and As Analytical Results -Area 3

Sample	Time	Depth	Total Arsenic	Total Lead
ID	Collected	Collected	Results	Results
		bgs	(in mg/Kg)	(in mg/Kg)
A3-1	1144	0'-2'	52	290
A3-2	1207	0'-2'	9.4	90
A3-3	1217	0'-2'	U	37
A3-4	1222	0'-2'	U	60
A3-5	1319	0'-2'	U	66
A3-6	1325	0'-2'	U	93
A3-7	1311	0'-2'	61	260
A3-8	1506	0'-2'	U	88
A3-9	1338	0'-2'	U	100
A3-10	1345	0'-2'	55	430
A3-11	1154	0'-2'	9	110
A3-12	1200	0'-2'	50	370
A3-13	1500	0'-2'	30	340
A3-14	1449	0'-2'	U	300
A3-15	1406	0'-2'	65	610
A3-16	1356	0'-2'	18	150
A3-17	1415	0'-2'	21	290
A3-18	1427	0'-2'	U	11
A3-19	1433	0'-2'	U	290
A3-20	1445	0'-2'	8.6	350

Note: U = not detected at the reporting limit

The chain-of-custody and the laboratory report for the TCLP analyses are included as an attachment to this report.



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## CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES AGREEMENT \*

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## CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES AGREEMENT \*

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#### **Evergreen Analytical Laboratory**

Date: 23-Oct-01

**CLIENT:** 

Transportation & Industrial Services, Inc

Project:

PBG-Area 3

Lab Order:

01-5739

**CASE NARRATIVE** 

#### SAMPLE RECEIVING

Samples were received in good condition within method specified holding times.

Samples were hand delivered to the laboratory by the client.

Samples did not require preservation.

The temperature of the sample(s) upon arrival was 20 °C.

NJO

#### **METALS ANALYSIS**

There are no anomalies to report for this work order. WKH

# Arsenic 6010 METALS, SOIL

Method Number: SW-6010

Client Project ID: PBG-Area 3

**Date Received** : 10/18/2001

Lab Work Order: 01-5739

**Date Prepared** : 10/19/2001

Units

: mg/Kg

Lab Sample ID	Client Sample ID	Sample Matrix	Sample Date	Analysis Date	Dilution Factor	Sample Result	Reporting Limit
01-5739-01A	A3-1	Soil	10/18/2001	10/20/2001	1	52	7.2
MB-10386				10/19/2001	1	U	10

Analyst

Approved

0/23/2001 2:19:29 P

#### Arsenic 6010 METALS, SOIL

Method Number : SW-6010

Date Received : 10/18/2001

**Date Prepared** : 10/20/2001

Client Project ID: PBG-Area 3
Lab Work Order: 01-5739

Units : mg/Kg

Lab Sample ID	Client Sample ID	Sample Matrix	Sample Date	Analysis Date	Dilution Factor	Sample Result	Reporting Limit
01-5739-02A	A3-11	Soil	10/18/2001	10/22/2001	1	9	8.3
01-5739-03A	A3-12	Soil	10/18/2001	10/22/2001	1	50	8.1
01-5739-04A	A3-2	Soil	10/18/2001	10/22/2001	1	9.4	8
01-5739-05A	A3-3	Soil	10/18/2001	10/22/2001	1	U	8.1
01-5739-06A	A3-4	Soil	10/18/2001	10/22/2001	1	U	8.3
01-5739-07A	A3-7	Soil	10/18/2001	10/22/2001	1	61	8
01-5739-08A	A3-5	Soil	10/18/2001	10/22/2001	1	U	8.1
01-5739-09A	A3-6	Soil	10/18/2001	10/22/2001	1	U	8.1
01-5739-10A	A3-9	Soil	10/18/2001	10/22/2001	1	U	8.1
01-5739-11A	A3-10	Soil	10/18/2001	10/22/2001	1	55	7.9
01-5739-12A	A3-16	Soil	10/18/2001	10/22/2001	1	18	7.6
01-5739-13A	A3-15	Soil	10/18/2001	10/23/2001	1	65	8.1
01-5739-14A	A3-17	Soil	10/18/2001	10/23/2001	1	21	7.2
01-5739-15A	A3-18	Soil	10/18/2001	10/23/2001	1	U	7.6
01-5739-16A	A3-19	Soil	10/18/2001	10/23/2001	1	U	8.2
01-5739-17A	A3-20	Soil	10/18/2001	10/23/2001	1	8.6	8.1
01-5739-18A	A3-14	Soil	10/18/2001	10/23/2001	1	U	8.2
01-5739-19A	A3-13	Soil	10/18/2001	10/23/2001	1	30	7.8

Analyst

Ty C

Approved

0/23/2001 2:19:29 P

#### Arsenic 6010 METALS, SOIL

Method Number: SW-6010

Client Project ID: PBG-Area 3

Date Received

: 10/18/2001

Lab Work Order: 01-5739 : mg/Kg

**Date Prepared** : 10/20/2001

Lab Sample ID	Client Sample ID	Sample Matrix	Sample Date	Analysis Date	Dilution Factor	Sample Result	Reporting Limit
01-5739-20A	A3-8	Soil	10/18/2001	10/23/2001	1	บ	8.3
MB-10395				10/22/2001	1	U	10

Units

Approved

# Lead 6010 METALS, SOIL

Method Number: SW-6010

Date Received: 10/18/2001

Date Prepared

: 10/18/2001 : 10/19/2001 Client Project ID: PBG-Area 3

Lab Work Order: 01-5739

Units

: mg/Kg

Lab Sample ID	Client Sample ID	Sample Matrix	Sample Date	Analysis Date	Dilution Factor	Sample Result	Reporting Limit
01-5739-01A	A3-1	Soil	10/18/2001	10/20/2001	1	290	5.1
MB-10386				10/19/2001	1	U	7

SE

Analyst

Approved

## Lead 6010 METALS, SOIL

Method Number : SW-6010 Date Received : 10/18/2001

**Date Prepared** : 10/20/2001

Client Project ID: PBG-Area 3

Lab Work Order: 01-5739 Units: mg/Kg

Lab Sample ID	Client Sample ID	Sample Matrix	Sample Date	Analysis Date	Dilution Factor	Sample Result	Reporting Limit
01-5739-02A	A3-11	Soil	10/18/2001	10/22/2001	1	110	5.8
01-5739-03A	A3-12	Soil	10/18/2001	10/22/2001	1	370	5.7
01-5739-04A	A3-2	Soil	10/18/2001	10/22/2001	1	90	5.6
01-5739-05A	A3-3	Soil	10/18/2001	10/22/2001	1	37	5.6
01-5739-06A	A3-4	Soil	10/18/2001	10/22/2001	1	60	.5.8
01-5739-07A	A3-7	Soil	10/18/2001	10/22/2001	1	260	5.6
01-5739-08A	A3-5	Soil	10/18/2001	10/22/2001	1	66	5.7
01-5739-09A	A3-6	Soil	10/18/2001	10/22/2001	1	93	5.6
01-5739-10A	A3-9	Soil	10/18/2001	10/22/2001	1	100	5.6
01-5739-11A	A3-10	Soil	10/18/2001	10/22/2001	1	430	5.6
01-5739-12A	A3-16	Soil	10/18/2001	10/22/2001	1	150	5.3
01-5739-13A	A3-15	Soil	10/18/2001	10/23/2001	1	610	5.7
01-5739-14A	A3-17	Soil	10/18/2001	10/23/2001	1	290	5
01-5739-15A	A3-18	Soil	10/18/2001	10/23/2001	1	11	5.3
01-5739-16A	A3-19	Soil	10/18/2001	10/23/2001	1	290	5.7
01-5739-17A	A3-20	Soil	10/18/2001	10/23/2001	1	350	5.6
01-5739-18A	A3-14	Soil	10/18/2001	10/23/2001	1	300	5.7
01-5739-19A	A3-13	Soil	10/18/2001	10/23/2001	1	340	5.5

Analyst

Approved

# Lead 6010 METALS, SOIL

Method Number: SW-6010

: 10/20/2001

Client Project ID: PBG-Area 3

**Date Received** : 10/18/2001

**Date Prepared** 

Lab Work Order: 01-5739

Units

: mg/Kg

Lab Sample ID	Client Sample ID	Sample Matrix	Sample Date	Analysis Date	Dilution Factor	Sample Result	Reporting Limit
01-5739-20A	A3-8	Soil	10/18/2001	10/23/2001	1	88	5.8
MB-10395				10/22/2001	1	U	7

55

Annre

Approved

#### Evergreen Analytical, Inc

Date: 23-Oct-2001

CLIENT:

Transportation & Industrial Services, Inc

Work Order:

01-5739

Project:

PBG-Area 3

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS-10386	Matrix: Soll		Test	Code: SW-60	110	Units: mg/Kg	Run	ID: ICP-IRIS	_011019A	Prep Date: 19-Oct-2001	
Client ID:			Ва	tch ID: 10386	;		Seq N	No: <b>343167</b>		Analysiś Date 19-Oct-2001 8	8:41 PM
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	Qual
Arsenic		135.4	0	170	ND D	79.7%	74.1	125.9			
Lead		96.67	0	106	ND	91.2%	76.1	123.6			
Sample ID: LCS-10395	Matrix: Soll		Test	Code: SW-60	)10	Units: mg/Kg	Run	ID: ICP-IRIS	 5_011022B	Prep Date: 20-Oct-2001	
Client ID:			Ва	tch ID: 10395	;		Seq I	No: <b>343628</b>		Analysis Date 22-Oct-2001	10:03 PN
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	Quai
Arsenic		140.1	0	161.9	ND	86.5%	74.1	125.9			
Lead		100.1	0	101	ND	99.2%	76.1	123.6			

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

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Photo 1. Hydraulic push rig utilized to advance borings

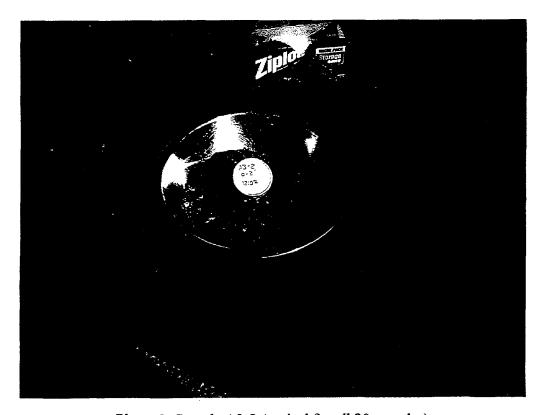


Photo 2. Sample A3-2 (typical for all 20 samples)

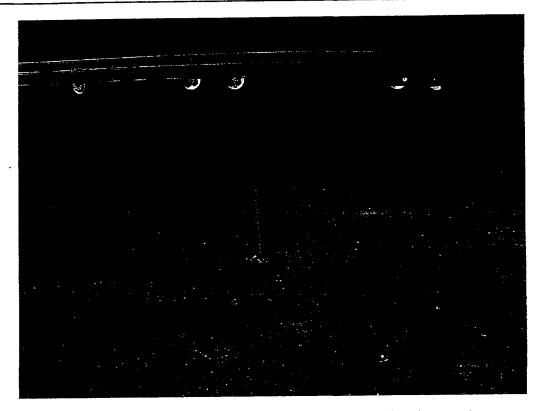


Photo 3. Location of A3-14 and typical gravel surface in Area 3

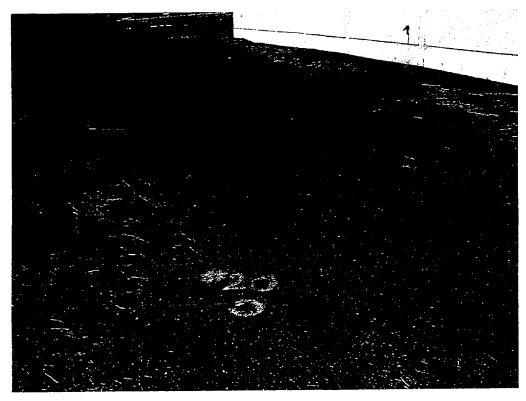


Photo 4. Boring location A3-20 and project north end of property



## PROJECT REPORT

Soil Testing for Lead & Arsenic

## Plastic Bottle Line Project New Truck Wash Area 6

**Project Location:** 

Pepsi Bottling Group 3801 Brighton Blvd. Denver, CO 80216

Prepared by:

Gary E. Johnson Transportation & Industrial Services, Inc. 3772 Puritan Way, Unit #4 Erie, CO 80516

Report Date:

November 4, 2001

#### **Table of Contents**

#### Section

- 1.0 Project Background
- 2.0 Sampling Locations
- 3.0 Sampling Procedure
- 4.0 Description of Soil Samples
- 5.0 Analytical Results

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Table 1. Soil Description of Samples-Area 6

Table 2. Total Pb and As Analytical Results-Area 6

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Figure 1. Sample Location Map

### **Appendix-List of Attachments**

- Oct. 15, 2001 Soil Samples Chain-of-Custody
- Oct. 15, 2001 Soil Samples Laboratory Reports
- Project Photographs

#### 1.0 Project Background

In order to obtain information on possible lead and arsenic in soils at the Pepsi Bottling Group facility located at 3801 Brighton Blvd., Denver, Colorado 80216, soil samples were collected from Area 6 of the Plastic Bottle Line Project prior to construction activities that will involve disturbing the soil. Area 6 is the location of the Truck Wash Building to be constructed in the northeast corner of the back lot of the bottling plant. The sampling project was conducted by Gary E. Johnson of Transportation & Industrial Services, Inc., 3772 Puritan Way, Unit # 4, Erie, Colorado 80516 on October 15, 2001 and October 17, 2001.

#### 2.0 Sampling Locations

The dimensions of the new truck was building are 42 feet by 110 feet. The boring locations were the corners of the building where caissons are to be constructed. Six borings were advanced to 20 feet below ground surface (bgs) within 1 foot of the surveyed locations of the building corners. Refer to the Sample Location Map attached to this report for a representation of the sample locations in Area 6.

#### 3.0 Sampling Procedure

On October 15, 2001 soil samples were collected using hollow stem auger drilling rig provided by Site Services, Inc., 15097 W. 44<sup>th</sup> Ave., Suite 2, Golden Colorado 80403. Four-inch augers were utilized to drill to the desired depth – 20 feet bgs. The borings were designated A6-1 through A6-6.Samples were collected from the cuttings from 0' to 10' and then from 10' to 20' yielding 12 samples from 6 borings.

The soil from each interval was placed in a stainless steel bowl and thoroughly mixed with a stainless steel spoon. Three sterile 4-ounce sample jars were filled with soil from the bowl for each sample, and the remaining soil was placed back into the boring.

The stainless steel augers, stainless steel bowl, and spoon were decontaminated between each sample collection to prevent cross contamination between samples. These items were scrubbed in an Alconox <sup>TM</sup> detergent and distilled water solution and then triple-rinsed with distilled water and dried with clean paper towels before being utilized for the next boring.

A chain-of-custody was completed and the sample jars were labeled, sealed, and placed in a cooler on ice for transportation to the laboratory. The samples were analyzed by Evergreen Analytical, Inc. located at 4036 Youngfield St. in Wheat Ridge, Colorado 80033. Each composite sample was submitted for Total Lead and Total Arsenic analysis by EPA Method SW6020A. The chain-of-custody and the laboratory reports are included as an attachment to this report.

#### 4.0 Description of Soil Samples

Below are physical descriptions of the soil samples collected from o' to 6' bgs in the location of the proposed Stormwater detention pond.

Table 1.
Soil Description of Samples – Area 6

Sample ID	Soil Description
A6-1 0-10	Dark black, moist sandy gravel with pebbles to 3/4" diameter, some
	small pieces of red brick to ½" diameter w/ wood pieces to 1"
A6-1 10-20	Dark black, moist sandy gravel with pebbles to ¾" diameter, some
	small pieces of red brick to ½" diameter. Bottom 2' red gravel
A6-2 0-10	Dark black, moist sandy gravel with pebbles to 3/4" diameter, some
	small pieces of red brick to ½" diameter
A6-2 10-20	Dark brown, moist sandy gravel with pebbles to ½" diameter, some
	small pieces of red brick to 1/2" diameter
A6-3 0-10	Dark brown, moist sandy gravel with pebbles to ½" diameter, some
	small pieces of red brick to ½" diameter, and wood chips
A6-3 10-20	Dark brown, moist sandy gravel with pebbles to ½" diameter, some
	small pieces of red brick to ½" diameter
A6-4 0-10	Dark brown, moist sandy gravel with pebbles to ½" diameter, some
	small pieces of red brick to ½" diameter
A6-4 10-20	Dark brown, moist sandy gravel with pebbles to 3/4" diameter, a lot of
	small pieces of red brick to 3/4" diameter
A6-5 0-10	Very dark brown silty sand with some gravel. Pieces of wood and
	other debris
A6-5 10-20	Dark brown, moist sandy gravel with pebbles to ½" diameter, some
	small pieces of red brick to ½" diameter
A6-6 0-10	Dark black, moist sandy gravel with pebbles to 3/4" diameter, some
	small pieces of red brick to ½" diameter
A6-6 10-20	Dark black, moist sandy gravel with pebbles to 3/4" diameter, some
	small pieces of red brick to ½" diameter. Bottom 1' red gravel

#### 5.0 Analytical Results

Below is a table listing the analytical results of the samples collected from Area 6.

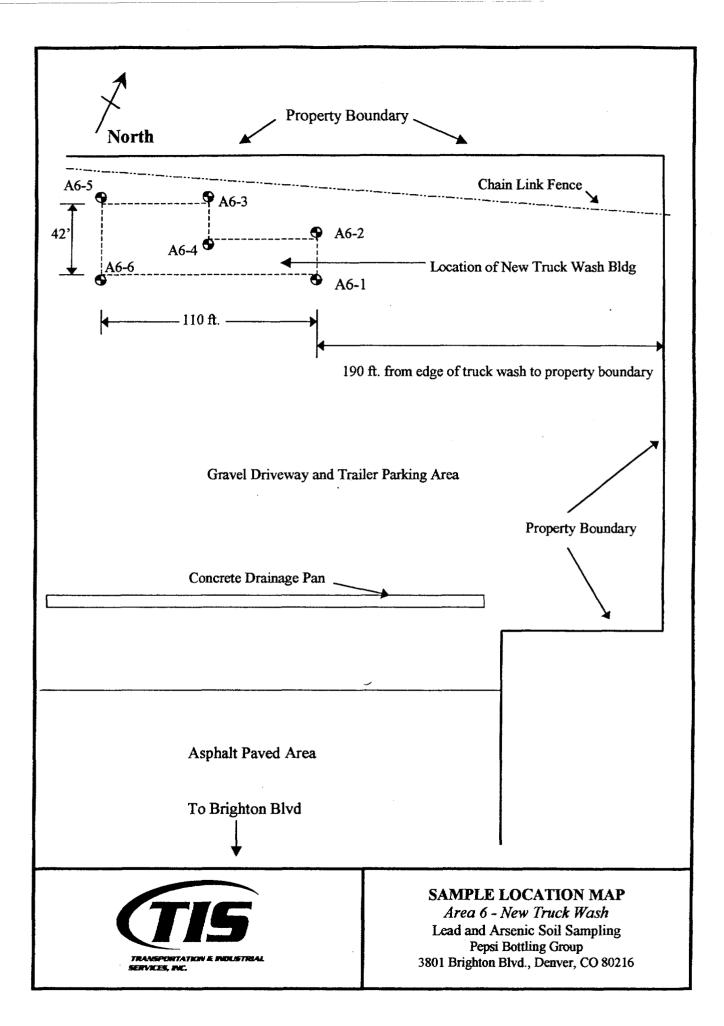
Table 2.
Pb and As Analytical Results -Area 6

Sample	Date	Time	Depth	Total Arsenic	Total Lead
ID	Collected	Collected	Collected	Results	Results
			bgs	(in mg/Kg)	(in mg/Kg)
A6-1 0-10	10/15/01	1605	0'-10'	9.2	210
A6-1 10-20	10/15/01	1615	10'-20'	13	110
A6-2 0-10	10/15/01	1625	0'-10'	16	630
A6-2 10-20	10/15/01	1630	10'-20'	67	540
A6-3 0-10	10/15/01	1645	• 0'-10'	23	400
A6-3 10-20	10/15/01	1655	10'-20'	12	220
A6-4 0-10	10/15/01	1705	0'-10'	19	1500
A6-4 10-20	10/15/01	1712	10'-20'	19	410
A6-5 0-10	10/15/01	1725	0'-10'	19	160
A6-5 10-20	10/15/01	1730	10'-20'	25	190
A6-6 0-10	10/15/01	1745	0'-10'	10	300
A6-6 10-20	10/15/01	1755	10'-20'	8.3	4900
A6-6 10-20*	10/15/01	1755	10'-20'	-	230

Note: U = not detected at the reporting limit

The chain-of-custody and the laboratory reports for these analyses are included as an attachment to this report.

<sup>\*</sup> Sample A6-6 was reanalyzed for total lead due to an anomalous result



CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES AGREEMENT \* Page 1 of 2 Evergreen Analytical Inc. Report Results by: (Date)\* CLIENT TIS 4036 Youngfield St. Standard 2 working weeks Wheat Ridge, Colorado 80033 ADDRESS 3772 Puritan Way, Unit#4 (303) 425-6021 CITY Frie STATE CO ZIP 80516 FAX (303) 425-6854 ☐ 1 - 2 work days (800) 845-7400 303-833-1111 FAX# 303-833-1119 ¥ 3-5 work days □ 6-9 work days E-Mail info@EvergreenAnalytical.com REPORT TO (Mr/Ms) Gary Johnson \*Rush analysis subject to additional fee INVOICETO TIS PROJECTILD. PBG Area 6 ANALYSIS REQUESTED For Laboratory MATRIX use only P.O.#\_\_\_\_\_EAL.QUOTE#\_Sampler: Jay 8, Ohm WO#01-5662 CICLP VOA/BNA/Pest/Herb/Metals BTEX 8021/602 (circle)/MTBE (circle) Water-Drinking/Discharge/Ground (circle) Pest/PCBs 8081/8082/608 (circle) Pesticides 8081/8141/608 (circle) 8.0.F.# NA TVPH 8015mod. (Gasoline) C/S(O) 4/4 / A/A Oil / Sludge / Multi-phase TEPH 8015mod. (Diesel) ead C/S(I) // / LO PCB Screen 8082 mod. NOTE: IDENTIFY KNOWN HAZARDS BELOW BNA 8270/625 (circle) VOA 8260/624 (circle) Solly Solid / Air / Gas CoolerTemp.\*C 10 Oil & Grease 413.1 Herbicides 8151 Please PRINT Seals Present Y / N / (NA Seals IntactY/N TRPH 418.1 all information: Samples Pres. Y / N (NA) Headspace Y / N /6\bar{1} SAMPLE DATE IDENTIFICATION SAMPLED TIME A6-1 0-10 10/15/01 1605 ΔI A6-1 10-20 10/15/01/1615 67 A6-2 0-10 10/15/01 1625 10-50 124 0-10 10-20 10/15/01/1655 0-10 10/15/01 1705 07 10-20 10/15/01/1712 10/15/01/1725 0-10 Ю LOOKEL Sample Fraction Instructions: Container

\* Important Note: By relinquishing samples client agrees to the terms and conditions on the reverse side hereof

Hold additional sample volume until notified by GEJohnson

Date/Time Relinquished by: (Signature)

730

Date/Time Received by: (Signature)

Date/Time

#### CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES AGREEMENT \*

Page 2 of 2

CLIENT_TIS  ADDRESS 3772 Puritan Way, Unit#  CITY_Erie STATE CO ZIP 80516  PHONE# 303-833-1111 FAX# 303  REPORT TO (Mr/Ms) Gary Johnson  INVOICE TO TIS	4	reen Analytical Inc. 4036 Youngfield St. Wheat Ridge, Colorado 80033 (303) 425-6021 FAX (303) 425-6854 (800) 845-7400 E-Mail info@EvergreenAnalytical.com	Report Results by: Standard 2 working weeks 3 day UST Analyses per Fee Schede * Rush:	□ ule □ 1 - 2 work days 6 - 9 work days
PROJECTI.D. PBG Area 6	MATRIX	ANALYSIS REQUES	TED	For Laboratory
P.O.#EAL.QU@TF\#	ts  bhase  str/Herb/Metals  e)	1/608 (circle) 32/608 (circle) od. le)/MTBE (circle) asoline) iesel) IPDES / SW846 Delow) W / SW846	Lead Arsenic	use only  Wo.#_ct] = 566.2  B.O.F.#  C/S (0)  C/S (i) 394
Please PRINT  all information:  SAMPLE DATE IDENTIFICATION SAMPLED TIME	(circle) (Solid / Air / Gas Oil / Sludge / Multi-phase Circle) VOA 8260/624 (circle) BNA 8270/625 (circle)	Pest/PCBs 8081/8141/608 (circle) PCB Screen 8082 mod. Herbicides 8151 BTEX 8021/602 (circle)/MTBE (circle) TVPH 8015mod. (Gasoline) TEPH 8015mod. (Diesel) Total Metals-DW / NPDES / SW846 Circle & list metals below)	TRPH 418.1  Total Le	Cooler Tempy 16 / O Seals Present YV N / NA Seals Infact Y / N Samples Pres. Y N / NA Headspace Y / N / NA By/
A6-6 0-10 10/15/01 1745 3				11
A6-6 10-20 10/15/01/1755 3	$X \cup X$			172
Sample	Fraction		44	LOC EG
Instructions: Centair	ner			
Hold additional sample volume	e until notified	by GE Johnson		
* Important Note: By relinquishing samples client agr		The state of the s		
Relinquished by: (Signature)  Date/Time Received by 10/16/01		rate/Time Relinquished by: (Signature)	Date/Time Received by: (Signature)	ignature) Date/Time

#### Arsenic 6010 METALS, SOIL

Method Number: SW-6010

**Date Received** : 10/16/2001 **Date Prepared** : 10/16/2001 Client Project ID: PBG Area 6

Lab Work Order: 01-5662

Units : mg/Kg

Lab Sample ID	Client Sample ID	Sample Matrix	Sample Date	Analysis Date	Dilution Factor	Sample Result	Reporting Limit
01-5662-01A	A6-1 0-10	Soil	10/15/2001	10/17/2001	1	9.2	7.8
01-5662-02A	A6-1 10-20	Soil	10/15/2001	10/17/2001	1	13	7.5
01-5662-03A	A6-2 0-10	Soil	10/15/2001	10/17/2001	1	16	7.6
01-5662-04A	A6-2 10-20	Soil	10/15/2001	10/17/2001	1	67	8.2
01-5662-05A	A6-3 0-10	Soil	10/15/2001	10/17/2001	1	23	8.2
01-5662-06A	A6-3 10-20	Soil	10/15/2001	10/17/2001	1	12	7.5
01-5662-07A	A6-4 0-10	Soil	10/15/2001	10/17/2001	1	19	7.8
01-5662-08A	A6-4 10-20	Soil	10/15/2001	10/17/2001	1	19	7.4
01-5662-09A	A6-5 0-10	Soil	10/15/2001	10/17/2001	1	19	7.8
01-5662-10A	A6-5 10-20	Soil	10/15/2001	10/17/2001	1	25	7.5
01-5662-11A	A6-6 0-10	Soil	10/15/2001	10/17/2001	1	10	8.1
01-5662-12A	A6-6 10-20	Soil	10/15/2001	10/17/2001	1	8.3	7.5
MB-10356				10/17/2001	1	U	10

Anc

Approved

0/17/2001 1:52:18 P

# Lead 6010 METALS, SOIL

Method Number : SW-6010 Date Received : 10/16/2001

**Date Prepared** : 10/16/2001

Client Project ID: PBG Area 6
Lab Work Order: 01-5662
Units: mg/Kg

Lab Sample ID	Client Sample ID	Sample Matrix	Sample Date	Analysis Date	Dilution Factor	Sample Result	Reporting Limit
01-5662-01A	A6-1 0-10	Soil	10/15/2001	10/17/2001	1	210	5.5
01-5662-02A	A6-1 10-20	Soil	10/15/2001	10/17/2001	1	110	5.3
01-5662-03A	A6-2 0-10	Soil	10/15/2001	10/17/2001	1	630	5.3
01-5662-04A	A6-2 10-20	Soil	10/15/2001	10/17/2001	1	540	5.7
01-5662-05A	A6-3 0-10	Soil .	10/15/2001	10/17/2001	1	400	5.7
01-5662-06A	A6-3 10-20	Soil	10/15/2001	10/17/2001	1	220	5.2
01-5662-07A	A6-4 0-10	Soil	10/15/2001	10/17/2001	1	1500	5.5
01-5662-08A	A6-4 10-20	Soil	10/15/2001	10/17/2001	1	410	5.2
01-5662-09A	A6-5 0-10	Soil	10/15/2001	10/17/2001	1	160	5.4
01-5662-10A	A6-5 10-20	Soil	10/15/2001	10/17/2001	1	190	5.3
01-5662-11A	A6-6 0-10	Soil	10/15/2001	10/17/2001	1	300	5.7
01-5662-12A	A6-6 10-20	Soil	10/15/2001	10/17/2001	1	4900	5.3
MB-10356				10/17/2001	1	U	7

Analyst

Approved

0/17/2001 1:52:18 P

#### Evergreen Analytical, Inc

Date: 17-Oct-2001

CLIENT:

Transportation & Industrial Services, Inc

Work Order: Project: 01-5662

PBG Area 6

**QC SUMMARY REPORT** 

Sample Matrix Spike

Sample ID: 01-5662-01AMS Matrix: Soil	662-01AMS Matrix: Soil Test Code: SW-6010				Units: mg/Kg	Run I	D: ICP-IRIS	_011016B	Prep Date:	16-Oct-2001	
Client ID:		Ba	tch ID: 10356			Seq N	lo: <b>342144</b>		Analysis Date	17-Oct-2001	12:50 AM
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	58.73	0	82.64	9.2	59.9%	75	125				S
Lead	255.1	0	82.64	210	54.6%	75	125				S
Sample ID: 01-5662-01AMSD Matrix: Soil		Test	Code: SW-60	)10	Units: mg/Kg	Runi	ID: ICP-IRIS	5_011016B	Prep Date:	16-Oct-2001	
Client ID:		Ва	tch ID: 10356	į.		Seq N	No: <b>342145</b>		Analysis Date	17-Oct-2001	12:56 AN
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	75.71	0	79.37	9.2	83.8%	75	125	58.73	33.2%	20	R
Lead	467.5	0	79.37	210	324.4%	75	125	255.1	142.4%	20	SR
Sample ID: 01-5662-01APDS Matrix: Soil		Test	Code: SW-60	)10	Units: mg/Kg	Run	ID: ICP-IRIS	 011016B	Prep Date:	16-Oct-2001	
Client ID:		Ва	tch ID: 10356	;		Seq N	No: <b>342146</b>		Analysis Date	17-Oct-2001	1:02 AM
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit_	Qual
Arsenic	78.46	0	65.1	9.2	106.4%	75	125				
Lead	283.4	0	65.1	210	112.7%	75	125		*****************		

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

<sup>\* -</sup> Not applicable to matrix spikes or LCS.

E - Analyte detected above calibration limits

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

## **Evergreen Analytical, Inc**

Date: 17-Oct-2001

CLIENT:

Transportation & Industrial Services, Inc

Work Order:

01-5662

Project:

PBG Area 6

**QC SUMMARY REPORT** 

Laboratory Control Spike - generic

Sample ID: LCS-10356	Matrix: Soll		Test	Code: SW-60	110	Units: mg/Kg	Run I	D: ICP-IRIS	_011016B	Prep Date:	16-Oct-200	1
Client ID:			Bat	ch ID: 10356			Seq N	lo: <b>342137</b>		Analysis Date	17-Oct-200	1 12:10 AM
Analyte	i	Resuit	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		140	0	170	ND D	82.3%	74.1	125.9	***************************************			
Lead		102.2	0	106	ND	96.4%	76.1	123.6	•••••			

# Lead 6010 METALS, SOIL

Method Number: SW-6010

Date Received : 10/16/2001

Date Prepared : 10/22/2001

Client Project ID: PBG Area 6

Lab Work Order: 01-5662

Units

: mg/Kg

Lab Sample ID	Client Sample ID	Sample Matrix	Sample Date	Analysis Date	Dilution Factor	Sample Result	Reporting Limit
01-5662-12A	A6-6 10-20	Soil	10/15/2001	10/22/2001	1	230	7
MB-10399				10/22/2001	1	U	7

Analyst

Approved

0/23/2001 2:09:10 P

#### **Evergreen Analytical, Inc**

Transportation & Industrial Services, Inc

Work Order:

01-5662

Project:

CLIENT:

PBG Area 6

## QC SUMMARY REPORT

Date: 23-Oct-2001

Laboratory Control Spike - generic

Sample ID: LCS-10399	Matrix: Soil		Test	Code: SW-60	)10	Units: mg/Kg	Run I	D: ICP-IRIS	_011022B	Prep Date	22-Oct-200	1
Client ID:			Ba	tch ID: 10399			Seq N	lo: <b>343611</b>		Analysis Date	22-Oct-200	1 8:23 PM
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		137.7	0	170	ND D	81.0%	74.1	125.9			·····	
Lead		98.92	0	106	ND	93.3%	76.1	123.6				

B - Analyte detected in the associated Method Blank



## PROJECT REPORT

Soil Testing for Lead & Arsenic

## Plastic Bottle Line Project Utility Trenches

**Project Location:** 

Pepsi Bottling Group 3801 Brighton Blvd. Denver, CO 80216

Prepared by:

Gary E. Johnson
Transportation & Industrial
Services, Inc.
3772 Puritan Way, Unit #4
Erie, CO 80516

Report Date:

November 4, 2001

#### **Table of Contents**

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1.0	Project Background
2.0	Sampling Locations
3.0	Sampling Procedure
4.0	Description of Soil Sample
5.0	Total Analytical Results
6.0	TCLP Analytical Results

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Table 1. Soil Description of Samples

Table 2. Total Pb and As Analytical Results-Utilities

Table 3. Totals Re-run and TVLP Pb and As Analytical Results

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Figure 1. Sample Location Map

## **Appendix-List of Attachments**

- Oct. 17-18, 2001 Soil Samples Chain-of-Custody
- Oct. 17-18, 2001 Soil Samples Laboratory Reports
- Project Photographs

#### 1.0 Project Background

In order to obtain information on possible lead and arsenic in soils at the Pepsi Bottling Group facility located at 3801 Brighton Blvd., Denver, Colorado 80216, soil samples were collected from subsurface soils in the locations of trenches that will be excavated for the installation of new utilities as part of the Plastic Bottle Line Project. The utilities to be installed consist of a new water supply line and a sanitary sewer line servicing the new Truck Wash (Area 6) and the installation of storm water piping that will collect and direct runoff from the new paved parking areas to the new Stormwater Detention Pond (Area 7). The sampling project was conducted by Gary E. Johnson of Transportation & Industrial Services, Inc., 3772 Puritan Way, Unit # 4, Erie, Colorado 80516 on October 17 and 18, 2001

#### 2.0 Sampling Locations

The location of the 3 new utility piping systems to be installed and the sampling locations are indicated on the Sample Location Map included with this report. The boring locations were selected approximately every 125 feet along the utility trench runs, with a minimum of one sample per pipe run leg. One composite soil sample from each of 14 soil borings was collected as a composite from the proposed depth of the utility piping plus 1 foot. The total depth below ground surface (bgs) for each boring location is indicated in Table 2 below.

#### 3.0 Sampling Procedure

The soil samples were collected using a Geoprobe hydraulic push drilling rig. Stainless steel drive tubes were advanced through the soil at each boring location to the desired depth. New clear plastic sampling sleeves were used to retrieve the samples from each boring. The soil removed from the plastic sleeve samples was placed in a stainless steel bowl and thoroughly mixed with a stainless steel spoon. Three sterile 4-ounce sample jars were filled with soil from the bowl for each sample, and the remaining soil was placed back into the boring. This procedure was repeated for each boring, thus yielding 14 composite soil samples for analysis representing soil that will be disturbed when trenching to install the new utilities. The samples were designated UT-1 through UT-14.

The stainless steel drive tubes, bowl, and spoon were decontaminated after each boring to prevent cross contamination between samples. These items were scrubbed in an Alconox <sup>TM</sup> detergent and distilled water solution and then triple-rinsed with distilled water and dried with clean paper towels.

A chain-of-custody was completed and the sample jars were labeled, sealed, and placed in a cooler on ice for transportation to the laboratory. The samples were analyzed by Evergreen Analytical, Inc. located at 4036 Youngfield St. in Wheat Ridge, Colorado 80033. Each composite sample was submitted for Total Lead and Total Arsenic analysis by EPA Method SW6020A. The chain-of-custody and the laboratory reports are included as an attachment to this report.

## 4.0 Description of Soil Samples

Below are physical descriptions of the soil samples collected from the proposed utility trenches.

Table 1.
Soil Description of Samples –Utilities

Sample ID	Soil Description
UT-1	Dark brown gravelly sand, poorly sorted with pebbles to 3/4" diameter and small pieces of red brick to 1/2" diameter
UT-2	Dark brown gravelly sand, poorly sorted with pebbles to 3/4" diameter and small pieces of red brick to 1/2" diameter
UT-3	Dark brown gravelly sand, poorly sorted with pebbles to 3/4" diameter and small pieces of red brick to 1/2" diameter
UT-4a	Dark brown gravelly sand, poorly sorted with pebbles to ¾" diameter and small pieces of red brick to ½" diameter
UT-5	Brown gravelly sand, poorly sorted with pebbles to 3/4" diameter and small pieces of red brick to 1/2" diameter
UT-6	Dark brown gravelly sand, poorly sorted with pebbles to 3/4" diameter and small pieces of red brick to 1/2" diameter
UT-7	Reddish-tan gravelly sand, poorly sorted with pebbles to ½" diameter
UT-8	Reddish-brown gravelly sand, poorly sorted with pebbles to ½" diameter
UT-9	Dark brown gravelly sand, poorly sorted with pebbles to ¾" diameter and small pieces of red brick to ½" diameter
UT-10	Brown gravelly sand, poorly sorted with pebbles to 3/4" diameter and several pieces of red brick to 1/2" diameter
UT-11	Reddish brown gravelly sand, poorly sorted with pebbles to ¾" diameter and several pieces of red brick to ½" diameter
UT-12	Dark brown gravelly sand, poorly sorted with pebbles to ¾" diameter and small pieces of red brick to ½" diameter
UT-13	Brown gravelly sand, poorly sorted with pebbles to ¾" diameter and small pieces of red brick to ½" diameter
UT-14	Brown gravelly sand, poorly sorted with pebbles to ¾" diameter and small pieces of red brick to ½" diameter

#### 5.0 Analytical Results

Below are the analytical results of the samples collected from the utility trenches.

Table 2.

Pb and As Analytical Results -Utilities

Sample ID	Date Collected	Time Collected	Depth Collected	Total Arsenic Results	Total Lead Results
			bgs	(in mg/Kg)	(in mg/Kg)
UT-1	10/17/01	1340	0-10'	11	160
UT-2	10/17/01	1420	0-10'	12	300
UT-3	10/17/01	1500	0-8'	14	940
UT-4a	10/17/01	1530	0-13'	50	350
UT-5	10/17/01	1620	0-7'	9.1	160
UT-6	10/18/01	1015	0-13'	U	180
UT-7	10/18/01	0912	0-10'	630	2800
UT-8	10/18/01	0933	0-9'	16	130
UT-9	10/18/01	1020	0-8'	U	46
UT-10	10/18/01	1033	0-8'	17	210
UT-11	10/18/01	1020	0-12'	42	490
UT-12	10/18/01	1030	0-9'	9.4	370
UT-13	10/18/01	1111	0-12'	U	31
UT-14	10/18/01	1136	0-11'	16	190

Note: U = not detected at the reporting limit

#### 6.0 TCLP Analytical Results

Sample UT-7 was selected for re-analysis for total lead and arsenic and by Toxicity Characteristic Leaching Procedure (TCLP). Evergreen Laboratory performed the tests request and below are the analytical results.

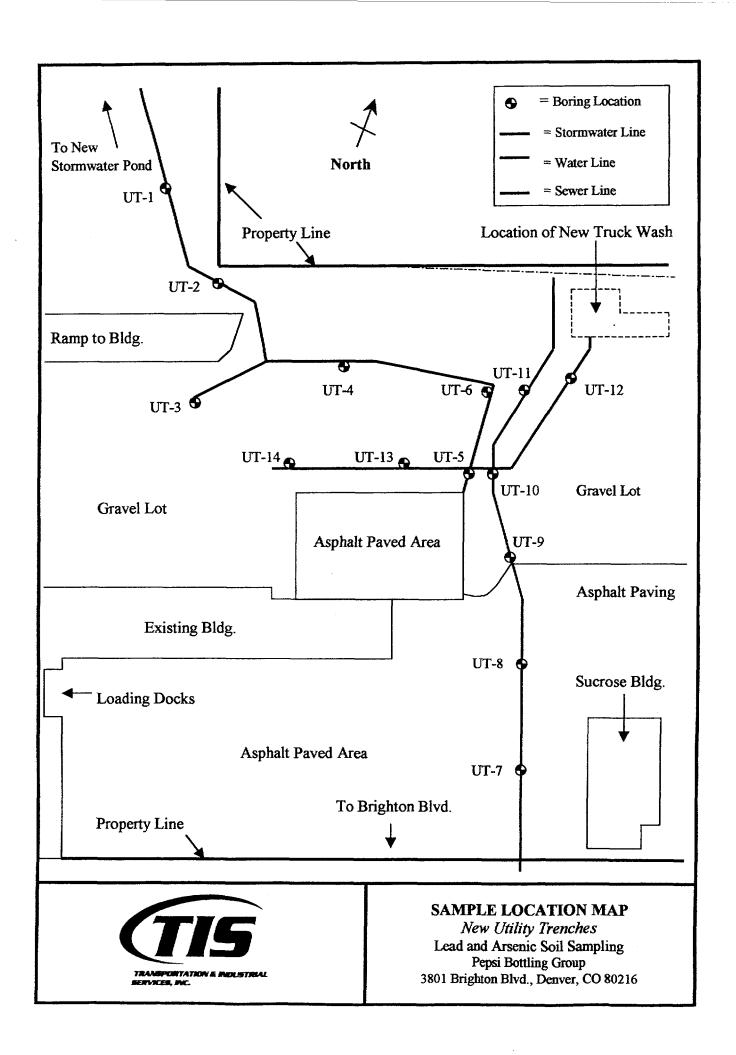
Table 3.

Totals Re-run and TCLP Pb and As Analytical Results

Sample ID	Total Arsenic Results (in mg/Kg)	TCLP Arsenic Results (in mg/L)	Total Lead Results (in mg/Kg)	TCLP Lead Results (in mg/L)
UT-7	630	-	2800	_
UT-7 Re-run	290	U	3800	53

Note: U = not detected at the reporting limit

The chain-of-custody and the laboratory reports for all analyses are included as an attachment to this report.



#### CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES AGREEMENT \*

Page of 2 Evergreen Analytical Inc. (Date)\* Report Results by:\_\_\_\_ 4036 Youngfield St. Standard 2 working weeks Wheat Ridge, Colorado 80033 ADDRESS 3772 Puritan Way, #4 (303) 425-6021 CITY Frie STATE CO ZIP 80516
PHONE# 303-833-1111 FAX# 303-833-1119 FAX (303) 425-6854 □ 1 - 2 work days (800) 845-7400 **★**(3) 5 work days □ 6 - 9 work days E-Mail info@EvergreenAnalytical.com REPORT TO (Mr/Ms) Gary Johnson \*Rush analysis subject to additional fee INVOICETO\_\_\_TIS **ANALYSIS REQUESTED** For Laboratory MATRIX PROJECTIO PBG - Utility use only BTEX 8021/602 (circle)/MTBE (circle) TCLP VOABNA/Pest/Herb/Metals Water-Drinking/Discharge/Ground (circle) Pest/PCBs 8081/8082/608 (circle) Pesticides 8081/8141/608 (circle) 6.0.F.# 1/1 0/5(0)\_1/2\_/ TVPH 8015mod. (Gasoline) Oil / Sludge / Multi-phase TEPH 8015mod. (Diesel) CISID MILL I H NOTE: IDENTIFY KNOWN HAZARDS BELOW BNA 8270/625 (circle) PCB Screen 8082 mod. VOA 8260/624 (circle) Soil Solid / Air / Gas Cooler Temp. °C 20 Oil & Grease 413.1 Please PRINT Seals Present Y / N / N Herbicides 8151 Seals Intact Y / N Samples Pres. Y / N / N / all information: Headspace Y / N / NO ŏ SAMPLE. DATE BUMT IDENTIFICATION SAMPLED TIME UT-1 10-17-01 1340 3 10-17-01 1420 S-TU 3 UT-3 10-17-01/1500/3 10-17-01 1530 3 UT-5 10-17-01 1620 10-18-01 1015 UT-7 10-18-01 0912 62-UT-8 10-18-01 0933 OS UT-9 04 3 10-18-01 1050 UT-10 10-18-01 1033 Sample Fraction Instructions: Container Hold extra sample volume until notified by GEJohnson

\* Important Note: By relinquishing samples client agrees to the terms and conditions on the reverse side hereof

Relinquished by: (Signature)

10 | Bate/Time | Received by: (Signature)

2 | Date/Time | Received by: (Signature)

10 | B/0|

10 | Date/Time | Received by: (Signature)

10/18/01

Relinquished by: (Signature)

Date/Time Re

Received by: (Signature)

Date/Time

## CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES AGREEMENT \*

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## Arsenic 6010 METALS, SOIL

Method Number: SW-6010

Date Received: 10/18/2001

Date Prepared

: 10/18/2001

Client Project ID: PBG-Utility

Lab Work Order: 01-5738

Units : mg/Kg

•				•	•		
Lab Sample ID	Client Sample ID	Sample Matrix	Sample Date	Analysis Date	Dilution Factor	Sample Result	Reporting Limit
01-5738-01A	UT-1	Soil	10/17/2001	10/19/2001	1	11	7.9
01-5738-02A	UT-2	Soil	10/17/2001	10/19/2001	1	12	7.3
01-5738-03A	UT-3	Soil	10/17/2001	10/19/2001	1	14	7.6
01-5738-04A	UT-4A	Soil	10/17/2001	10/19/2001	1	50	7.2
01-5738-05A	UT-5	Soil	10/17/2001	10/19/2001	1	9.1	7.8
01-5738-06A	UT-6	Soil	10/18/2001	10/19/2001	1	U	7.8
01-5738-07A	UT-7	Soil	10/18/2001	10/19/2001	1	630	7.8
01-5738-08A	· UT-8	Soil	10/18/2001	10/19/2001	1	16	7.5
01-5738-09A	UT-9	Soil	10/18/2001	10/19/2001	1	U	7.8
01-5738-10A	UT-10	Soil	10/18/2001	10/19/2001	1	17	7.6
01-5738-11A	UT-11	Soil	10/18/2001	10/19/2001	1	42	7.8
01-5738-12A	UT-12	Soil	10/18/2001	10/19/2001	1	9.4	7.9
01-5738-13A	UT-13	Soil	10/18/2001	10/19/2001	1	U	7.4
01-5738-14A	UT-14	Soil	10/18/2001	10/20/2001	1	16	7.5
MB-10386				10/19/2001	1	U	10

Analyst

Approved

0/23/2001 11:04:04 A

# Lead 6010 METALS, SOIL

Method Number: SW-6010

**Date Received** : 10/18/2001 **Date Prepared** : 10/19/2001 Client Project ID: PBG-Utility Lab Work Order: 01-5738

Units

: mg/Kg

Lab Sample ID	Client Sample ID	Sample Matrix	Sample Date	Analysis Date	Dilution Factor	Sample Result	Reporting Limit
01-5738-01A	UT-1	Soil	10/17/2001	10/19/2001	1	160	5.5
01-5738-02A	UT-2	Soil	10/17/2001	10/19/2001	1	300	5.1
01-5738-03A	UT-3	Soil	10/17/2001	10/19/2001	1	940	5.3
01-5738-04A	UT-4A	Soil	10/17/2001	10/19/2001	1	350	5
01-5738-05A	UT-5	Soil	10/17/2001	10/19/2001	1	160	5.4
01-5738-06A	UT-6	Soil	10/18/2001	10/19/2001	1	180	5.4
01-5738-07A	UT-7	Soil	10/18/2001	10/19/2001	1	2800	5.5
01-5738-08A	UT-8	Soil	10/18/2001	10/19/2001	1	130	5.3
01-5738-09A	UT-9	Soil	10/18/2001	10/19/2001	1	46	5.4
01-5738-10A	UT-10	Soil	10/18/2001	10/19/2001	1	210	5.3
01-5738-11A	UT-11	Soil	10/18/2001	10/19/2001	1	490	5.4
01-5738-12A	UT-12	Soil	10/18/2001	10/19/2001	1	370	5.5
01-5738-13A	UT-13	Soil	10/18/2001	10/19/2001	1	31	5.2
01-5738-14A	UT-14	Soil	10/18/2001	10/20/2001	1	190	5.3
MB-10386				10/19/2001	1	U	7

Analyst

Approved

0/23/2001 11:04:05 A

## Evergreen Analytical, Inc

Date: 23-Oct-2001

CLIENT:

Transportation & Industrial Services, Inc

Work Order:

01-5738

Project:

PBG-Utility

**QC SUMMARY REPORT** 

Laboratory Control Spike - generic

Sample ID: LCS-10386	Matrix: Soll		Test	Code: SW-60	)10	Units: mg/Kg	Run l	D: ICP-IRIS	_011019A	Prep Date:	19-Oct-200	1
Client ID:			Ва	tch ID: 10386	i		Seq N	lo: <b>343167</b>		Analysis Date	19-Oct-200	1 8:41 PM
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	<b>RPDLimit</b>	Qual
Arsenic		135.4	0	170	<sup>-</sup> סא	79.7%	74.1	125.9		•••••		
Lead		96.67	0	106	ND	91.2%	76.1	123.6			****	

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

Client Sample ID: UT-7

**Lab Sample ID** : 01-5851-01A **Date Collected** : 10/18/2001

Date Received

: 10/18/2001

Client Project ID: PBG Utility

Lab Work Order: 01-5851

Sample Matrix : Soil

Method: SW-6010	6010 <b>M</b> ET			
Date Prepared : 10/26/2001	Lab File ID : 1029PM		Effective Dilution :	l
<b>Date Analyzed</b> : 10/30/2001	Method Blank : MB-104	39		
Compound Name	CAS Number	Concentration	RL	Units
Arsenic	7440-38-2	290	8.2	mg/Kg
Lead	7439-92-1	3800	5.7	mg/Kg

Method: SW-6010	TCL	P METALS		
Date Prepared       : 10/26/2001         Date Analyzed       : 10/29/2001	Lab File ID : 1029 Method Blank : MB-	• • •	Effective Dilution	: 1
Compound Name	CAS Number	Concentration	RL	Units
Arsenic	7440-38-2	U	. 0.5	mg/L
Lead	7439-92-1	53 *	0.5	mg/L

Qualifiers:

- U Not Detected at the Reporting Limit (RL)
- J Analyte detected below Practical Quantitation Limit (PQL)
- E Extrapolated value. See rerun at dilution.
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank. This value was not subtracted from the sample result.
- \* Value exceeds maximum contamination limit (MCL)
- R Dilution Test RPD >10% indicates possible interference.

Analyst

Approved

10/30/2001 2:15 PM

#### Method Blank Data Report

Lab Work Order: 01-5851

Lab Sample ID : MB-10439

Client Project ID: PBG Utility

Method: SW-6010	6010 MET			
Date Prepared : 10/26/2001 Date Analyzed : 10/29/2001	Lab File ID : 1029PM Method Blank :		Effective Dilution :	1
Compound Name	CAS Number	Concentration	RL	Units
Arsenic	7440-38-2	U	10	mg/Kg
Lead	7439-92-1	U	7	mg/Kg

Qualifiers:

U - Not Detected at the Reporting Limit (RL)

J - Analyte detected below Practical Quantitation Limit (PQL)

E - Extrapolated value. See rerun at dilution.

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

yst Appro

10/30/2001 2:15 PM

Method Blank Data Report

Lab Work Order: 01-5851

Client Project ID: PBG Utility

Lab Sample ID : MB-10426/10434

Method: SW-6010		TCLP ME	TALS		
Date Prepared : 10/26/2001 Date Analyzed : 10/29/2001	Lab File ID Method Blank	: 1029PM		Effective Dilution : 1	
Compound Name	CAS Number	·	Concentration	RL	Units
Arsenic	7440-38-2		U	0.5	mg/L
Lead	7439-92-1		U	0.5	mg/L

Qualifiers:

U - Not Detected at the Reporting Limit (RL)

J - Analyte detected below Practical Quantitation Limit (PQL)

E - Extrapolated value. See rerun at dilution.

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

st Appro

10/30/2001 2:15 PM

## Evergreen Analytical, Inc

**CLIENT:** 

Transportation & Industrial Services, Inc

Work Order: Project:

01-5851 **PBG** Utility Date: 30-Oct-2001

## **QC SUMMARY REPORT**

Laboratory Control Spike - generic

Sample ID: LCS-10439	Matrix: Soil		Test Code: SW-6010			Units: mg/Kg	Run ID: ICP-IRIS_011029B			Prep Date: 26-Oct-2001		
Client ID:			Batch ID: 10439				Seq No: 345257			Analysis Date	e 29-Oct-2001 11:07 PM	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	<b>RPDLimit</b>	Qual
Arsenic		143.9	0	168.3	ND T	85.5%	74.1	125.9				
Lead	103	103.7	0	105	ND	98.8%	76.1	123.6		•••••	•••••	
Sample ID: LCS-10434	Matrix: Extract Test Code: SW-6010				Units: mg/L	Run	D: ICP-IRIS	_011029B	Prep Date	: 26-Oct-200	1	
Client ID:	Batch ID: 10434					Seq No: 345242			Analysis Date 29-Oct-2001 9:32 PM			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	<del></del>	21.79	0	25	ND D	87.2%	71.04	124.4				*
Barium		43.31	0	50	3	80.6%	75	125			**************	В
Cadmium		4.443	0	5	ND	88.9%	83.11	109.37				*
Chromium		25.97	0	25	ND	103.9%	82.86	106.49				*
Lead		23.39	0	25	ND	93.6%	79.35	108.06			•••••	*
Selenium		8.494	0	10	ND	84.9%	68.13	115.93			•••••	*
Silver		0.4555	. 0	0.5	ND	91.1%	59.18	127.15				

<sup>\* -</sup> Not applicable to matrix spikes or LCS.

E - Analyte detected above calibration limits

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits